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ISOLATION AND SCREENING FUNGAL SYMBIONT IN GREEN ALGA ULVA RETICULATA AS CANDIDATE OF ANTIBIOTIC PRODUCER

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Abstract - The isolation of fungal symbiont from Ulva reticulata by direct planting method on Potato Dextrose Agar plate was performed. Preliminary screening of the fungal symbionts as a candidate of antibiotic producer involved a fermentation process in Potato Dextrose Broth supplemented with 0.5 mg % yeast extract using shaker at 120 rpm for 7 days. Antimicrobial activity of fermentation supernatants was examined using disc agar diffusion method against Staphylococcus aureus, Escherichia coli, Bacillus subtilis, Candida albicans and Malasezzia furfur. We found that three isolates, identified by macroscopic and microscopic characteristics, were molds genus Aspergillus, Penicillium and Cladosporium and one of them was unidentified fungi. Supernatant of Aspergillus, Penicillium, Cladosporium and theunidentified fungi demonstrated a high antifungal activity against C. albicans, verified by the diameter zone of inhibitions of 28.04 mm, 24.98 mm, 25.38 mm, and 27.73 mm, respectively. Only supernatant of the unidentified fungi had antifungal activity against M. furfur. A high antibacterial activity against S.aureus was shown by the supernatant of Penicillium and Chladosporium with diameter zone of inhibitions of 19.15 mm and 16.56 mm, respectively. All isolates had low antibacterial activity against E.coli and S.thyposa. Fungal symbionts in Ulva reticulata from Takalar, South Sulawesi are potential as a candidate of antibiotic producer, especially antibacterial activity against S.aureus and C.albicans.